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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/646,346	11/15/2000	Mario Pagliaro	PAGLIAR01	9119

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BROWDY AND NEIMARK, P.L.L.C.  
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WASHINGTON, DC 20001-5303

EXAMINER

LEWIS, PATRICK T

ART UNIT	PAPER NUMBER
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1623

10

DATE MAILED: 04/07/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b> 09/646,346	<b>Applicant(s)</b> PAGLIARO ET AL.	
	<b>Examiner</b> Patrick T. Lewis	<b>Art Unit</b> 1623	

**-- Th MAILING DATE of this communication appears on the cover sheet with the correspondence address --**

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 16 January 2003.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-11 and 14-23 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 3-7, 9-18 and 21-23 is/are allowed.
- 6) ☒ Claim(s) 1, 2, 8 and 20 is/are rejected.
- 7) ☒ Claim(s) 19 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.  
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

**Priority under 35 U.S.C. §§ 119 and 120**

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☒ All    b) ☐ Some \* c) ☐ None of:  
1. ☐ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).  
\* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).  
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                             | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s). _____  |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)         | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ | 6) <input type="checkbox"/> Other:  |

## **DETAILED ACTION**

### ***Objections/Rejections Set For the in Office Action dated July 30, 2002***

1. Claim 14 was objected to because the subscripts in the primary oxidants were unclear.
2. Claims 3, 13-17, 19, and 21 were rejected under 35 U.S.C. 112, second paragraph.
3. Claims 1-2, 4-11, 18, and 20 were rejected under 35 U.S.C. 103(a) as being unpatentable over Avnir et al. U.S. Patent 5,292,801 (Avnir) in combination with Matsui et al. J. Of Sol-Gel Science and Technology, **1997**, Vol. 9, pages 273-277 (Matsui).

### ***Applicant's Response dated January 16, 2003***

4. In the Response filed January 16, 2003, the specification was amended. Claim 13 was canceled. Claims 1, 3-7, 9, 11, 14-16, 18, and 21 were amended. Claims 22-23 were added. An action on the merits of claims 1-11 and 14-23 is contained herein below.
5. Applicant's amendments filed January 16, 2003 have been fully considered and have overcome the objection of claim 14.
6. Applicant's amendments filed January 16, 2003 have been fully considered and have overcome the rejection of claims 3, 13-17, 19, and 21 under 35 U.S.C. 112, second paragraph.

7. Applicant's amendments filed January 16, 2003 have been fully considered and have overcome the rejection of claims 4-7, 9-11, and 18 under 35 U.S.C. 103(a). The rejection of claims 1-2, 8, and 20 under 35 U.S.C § 103(a), is maintained for the reasons of record set forth in the Office Action dated July 30, 2002.

### ***Response to Arguments***

8. Applicant's arguments filed January 16, 2003 have been fully considered but they are not persuasive.

Applicant argues: 1) Avnir does not suggest the use of materials other than enzymes for use as catalysts entrapped within sol-gel glasses; and 2) Matsui teaches that TEMPOL may decompose, in effect, teaching away from the present invention. Applicant has further provided a list of references that allegedly report "the first applications ever reported of sol-gels doped with TEMPO for the catalytic oxidation of alcohols to form valuable carbonyls and carboxyl compounds." The references provided are not listed on a proper information disclosure statement. Therefore, unless the references have been cited by the examiner on form PTO-892, applicant should not assume references have been considered.

In response to applicant's arguments against the references individually, one cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981); *In re Merck & Co.*, 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986).

Avnir teaches the instantly claimed methodological steps. Avnir does not specifically teach the use of a nitroxyl-containing or nitroxyl precursor containing dopant as part of the process; however it does not disclaim any potential organic radicals known to be used in sol-gel technology. Matsui teaches the use of TEMPOL in the preparation and testing of doped sol-gel glasses. The selection of the specific monomer, dopant, and surface or support is seen to be well within the purview of the skilled artisan as Matsui teaches doped sol-gel preparations using nitroxide or nitroxyl precursors as applicant claims. With respect to Matsui teaching away from the instantly claimed invention, the examiner disagrees with applicant's characterization of the teachings. Matsui does not teach that TEMPOL is decomposed but rather offers a possible explanation as to why signal intensity of the ESR spectra decreased over time. Clearly, Matsui does indeed teach the suitability of TEMPOL being incorporated into sol-gel preparations. The selection of a known material based on its suitability for its intended use is *prima facie* obvious. Now that the general reaction has been shown to be old, applicant bears the burden of providing reason or authority which would substantiate the assertions that some reactive conditions involving the starting materials would take part in or affect the basic reaction and thus alter the nature of the product or the operability of the process and thus the unobviousness of the method for producing it.

In the absence of some proof of a secondary nature to obviate the rejection as set forth in the Office Action dated July 30, 2002, or of some specific limitations which would tip the scale of patentability in the favor of the instantly claimed invention, it would

have been obvious to one of ordinary skill in this art at the time of the invention to formulate a reactive sol-gel catalytic porous material doped with stable di-tertiary-alkyl nitroxyl radical employing the instantly claimed methodological steps.

### ***Conclusion***

9. Claims 1-11 and 14-23 are pending. Claims 1-2, 8, and 20 are rejected. Claim 19 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims. Claims 3-7, 9-11, 12-18, and 21-23 appear to be free of the prior art.

10. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Art Unit: 1623

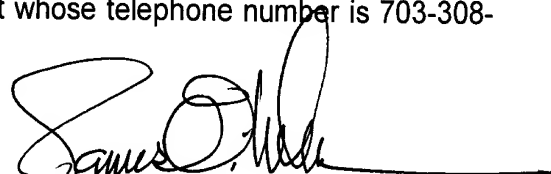
### **Contacts**

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Patrick T. Lewis whose telephone number is 703-305-4043. The examiner can normally be reached on M-F 8:00 am to 4:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, James O. Wilson can be reached on 703-308-4624. The fax phone numbers for the organization where this application or proceeding is assigned are 703-305-3014 for regular communications and 703-305-3014 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0196.

Patrick T. Lewis, PhD  
Examiner  
Art Unit 1623



James O. Wilson  
Supervisory Patent Examiner  
Technology Center 1600

ptl  
April 4, 2003